

Why do biochemists that are isolating protein work in the cold?

Answer: It is better to work at the lower temperatures since proteins are more stable cold. Protein biochemistry laboratories generally have a cold room, so that proteins can be isolated and purified at cold temperatures to keep them stable.

Also, when it's needed to extract the proteins from living cells, cell disruption will release a variety of enzymes that may denature or destroy the cellular constituents that we wish to study. A variety of precautions (e.g., keeping everything cold, including proteolytic enzyme inhibitors, etc.) have been incorporated into all isolation protocols to avoid these problems.